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TITLE : SPECTRAL REFLECTANCE VARIABLE ALLOY AND RECORDING MATERIAL

ABSTRACT : PURPOSE: To obtain a spectral reflectance variable alloy for data recording, display and sensor using the change of spectral reflectance with the change of crystal structure of alloy by optical and thermal energy, which is obtained by including the specified amount of Cu, Al and Mn.

CONSTITUTION: A Cu alloy includes Cu mainly, by weight, 14~16.5% Al and 0.01~15.0% Mn. The Cu alloy is the spectral reflectance variable alloy, which has the different crystal structure between the first temperature (high temperature) than room temperature in a solid state and the lower temperature (low temperature) state than the first temperature and the different crystal structure as that by non-quenching in the low temperature by quenching from the high temperature. The Cu alloy has a different phase of the crystal structure in at least two temperature areas on the solid phase, the different spectral reflectance between the quenched state of a high temperature phase and low temperature phase state of non-quenching in a standard state and the characteristic of variable spectral reflectance by heating and quenching in the high temperature phase area, and heating and cooling in the low temperature phase area.

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